

**AMENDMENTS TO THE SPECIFICATION**

Please replace paragraph [045] beginning on page 10 with the following rewritten paragraph:

Figures 12a, 12b and 12c are a sequence of schematic cross-sectional side elevations of the membrane region of an eighth embodiment and show the use of a transfer duct and a separate rupturable membrane to create a mixed gas-particle cloud between two closures in the driver chamber; **and**

Please replace paragraph [046] beginning on page 10 with the following rewritten paragraph:

Figures 13a, 13b, and 13c are a sequence of schematic cross-sectional side elevations of the membrane region of a modification of the eighth embodiment in which the transfer duct is positioned in the upstream closure means[.]; **and**

Please add the following new paragraph on page 10, after paragraph [046] and before paragraph [047]:

Figure 14 shows a scored membrane according to the invention.

Please replace paragraph [050] beginning on page 15 and continuing onto page 16 with the following rewritten paragraph:

At the interface between the driver chamber 51 and duct section 52 is a rupturable membrane 53. The membrane 53 is of the type disclosed in Bellhouse et al and typically ruptures, with a pressure difference across it in a range from around 5 to 20 bar, preferably 10 to 15 bar. The rupture pressure is an important device parameter but other rupture pressures could also be used depending on the desired results. **As shown in Figure 14, [(C)]**control of the rupture process can be important for mixing and flow uniformity and may be enhanced by the prior indentation or scoring of the

membrane 53, preferably along radial lines 70 along which the rupture will propagate. This provides for more symmetrical membrane opening which in turn can provide a more symmetrical particle distribution at the target plane.

Please replace paragraph [068] beginning on page 22 with the following rewritten paragraph:

Ensuring that the particles 58 are entrained in the quasi-steady flow is believed to provide a further advantage. When a flow impinges on a flat area 41 (in this case the skin or other tissue), an "impingement region" (see Figure 4) is set up. This region comprises a stagnation bubble 42 which serves to reduce the speed of the particles 58 as they approach the surface of the skin 41. Ideally, the nozzle exit is maintained at a predetermined distance from the target plane by a spacer (~~not shown in Figure 4~~ 60). The quasi-steady flow expanded from region 3 within the divergent duct is a supersonic flow and it is slowed down in the impingement region by a shock wave 43. With the correctly expanded divergent nozzle, this supersonic flow forms a parallel jet at the exit and thus creates an essentially normal shock 43 in the impingement region. This controlled impingement region ensures that the drug particles 58 maintain uniform velocities from the jet centreline to the outer edges as they decelerate after passing through the shock and before impacting the skin or tissue target.